In the Claims

Claims 1-63 (Cancel)

64. (Original) A method of evaluating the efficacy of targeted drug therapy, comprising the steps of:

delivering a quantity of predetermined gene treatment preparation or pharmaceutical drug *in vivo* into a mammalian subject having a target site and a treatment condition;

injecting a predetermined quantity of gaseous phase hyperpolarized ^{129}Xe *in vivo* into a mammalian subject such that the hyperpolarized gas is delivered to the target site in gaseous or dissolved form;

generating a NMR image or spectroscopic signal of the target site associated with the injected hyperpolarized ^{129}Xe gas; and

evaluating the NMR image or spectroscopic signal to evaluate the efficacy of the gene treatment or drug on the treatment condition administered in said delivering step.

65. (Original) A method according to Claim 64, further comprising the step of acquiring at least two sets of data, the data representing two temporally spaced apart points in time, to evaluate if the treatment condition is influenced by the drug or gene therapy introduced in said delivering step.

66. (Original) A method according to Claim 64, further comprising the step of evaluating whether the drug is properly delivered to the target site.

67. (Original) A method according to Claim 64, wherein said at least two data sets correspond with a hyperpolarized 129Xe gas NMR signal data acquisition obtained both before said delivering step and after said delivering step.

68. (Original) A method according to Claim 65, further comprising at least one of adjusting the quantity or formulation of the drug and confirming the proper delivery to the target site.

69. (Original) A method according to Claim 64, wherein the treatment condition is one of cancer, cardiac, renal, hepatic or pulmonary function, and cerebral function, and wherein the target site is selected so as to administer polarized ^{129}Xe gas to a region representative of that condition.

Claims 70-79 (Cancel)

80. (Original) A method of preparing a gas container having a sealable gas holding chamber prior to the introduction of a polarized product therein, comprising the steps of:

(a) evacuating the gas container;

(b) introducing a quantity of CO_2 gas therein; and

(c) repeating step (a) after step (b).

Claims 81-88 (Cancel)